

continue the trivial name, not only because it is *Mnium annotinum* of Linnæus, but, as applied to the genus *Bryum*, it is older than *turbinatum*.

I am, my dear Sir, yours sincerely,

EDWARD FORSTER.

Woodford, January 17th, 1842.

LIII.—On Bird-catching Spiders, with remarks on the Communication from W. S. MacLeay, Esq. upon that subject, in the January number of the *Annals*. By W. E. SHUCKARD, Libr. R.S.

To the Editors of the *Annals and Magazine of Natural History*.

GENTLEMEN,

I AM unwilling to have it supposed that in my reference in Lardner's Cyclopædia to Mr. W. S. MacLeay's private letter, mentioned in his communication in your last number, I had made any use of it beyond what I understood to be in conformity with his express wish; and shall therefore merely refer to the passage in his letter which I shall quote below, not merely permitting, but desiring me to make known his retraction of an opinion which he had expressed in his paper on *Mygale* in the 'Transactions of the Zoological Society.'

With respect to the errors which he has ascribed to me, I readily acknowledge two, not that I made them willingly or wilfully, for I see them only now that they are pointed out to me; one of these however is but partly mine, namely, mistaking *Zosterops* for *Gasterops*, which must be attributed in a great measure to Mr. MacLeay's letter being, as he himself states, hastily written; and being myself no ornithologist, I did not investigate the name, but took it as it seemed to present itself to me. My second error is, that I said, "He therefore retracts his observations upon *Mygale* in the Zoological Transactions." This, I admit, was deduced from too hasty a reading of his letter; but certainly I did not mean it to imply that Mr. MacLeay retracted *all* his observations upon *Mygale*, as he infers, but those only which referred to the subject in hand, namely, the *possibility* of its propensity to feed upon small birds—when it could catch them.

With respect to the "tale of *Mygale* catching birds being either 'substantiated or confirmed' by another spider of totally different habits having been observed to catch them," although Mr. MacLeay may "deny," I certainly never asserted; I merely mentioned the *probability* of it from the analogy, as the most powerful, most rapacious and ferocious genus of the class was quite as likely to prey upon

small birds when it could catch them, for there is nothing in their organization to prohibit their indulging in such a repast when falling in their way; and I still consider that Mr. MacLeay's statement with regard to one of the *Epeiridæ* lends authority by analogy to the assumption that such might be the case. If even it be the exception to the rule of their insectivorous habits observed only by his father and himself, and which he remarks nobody but themselves has witnessed at Sidney, this gives further plausibility to Madame Merian's statement; for might not she have observed a similar divergence from ordinary habits in the case of *Mygale* in the Brazils to that which was detected by Mr. MacLeay and his father in the case of one of the *Epeiridæ* in New Holland? But Madame Merian is not the only authority upon which this peculiarity in the habits of *Mygale* is based. We possess much more recent, and much weightier evidence; and as to Langsdorff's* total denial of it, this may pass current for what it is worth, when we reflect how absurd every positive negation is in natural history, merely because the fact has not come under the observer's notice, provided always there be no insuperable objection arising from organization to the possibility of its occurrence. Perty† says of Langsdorff's statement: "C. Langsdorff meâ opinione perperam negat, M. avicularem aves parvas apprehendere, et devorare, addens, eam insectis solummodo vicitare. Observatores recentissimi, priscorum indicia repetentes, non tantum avibus sed etiam reptilibus minoribus, præsertim Sauriis ex Anolis genere nutrirî asserunt." Baron Walckenaer, who has made the *Arachnidæ* the study of his life, gives his opinion deduced from the observations of recent travellers in the following words: "The Theraphoses," the tribe of which *Mygale* is the first and chief genus, "include the largest species of *Arachnidæ*, and catch in their *nets*! not only very large insects, but also small birds, such as humming-birds ‡." In support of this he cites Milbert's 'Voyage à l'Isle de France,' and Palissot de Beauvais, who says of the *Mygale Blondii*, that at night it ascends trees, enters the nests of humming-birds and sucks their eggs or the blood of their young ones. Percival, in his 'Account of Ceylon,' says of the *Mygale fasciata*, "There is an immense spider found here, with legs not less than four inches long, and having the body covered with thick black hair. The *webs*! which it makes are strong enough to entangle and hold even small birds, which form

* Reise um die Welt. i. Bd. 63. † Delect. Animal. Artic., p. 37.

‡ Walckenaer, Aptères, tom. i. p. 205. 1837.

its usual prey*." It was, besides, M. Latreille's opinion, who distinctly says of *Mygale*, "This division contains those monstrous spiders, whose legs, in their natural position, occupy a circular space, the diameter of which is seven or eight inches, and which sometimes seize upon small birds†;" and M. Moreau de Jonnès, who made the natural history of these spiders the subject of special observation in the Island of Martinique, says, "It chases far and wide in search of its prey, and conceals itself beneath leaves for the purpose of surprising it, and it will climb the branches of trees to devour the young of the humming-bird, and of *Certhia flaveola*, Linn.‡." He further says of its mode of attacking its prey, whence we may infer it was derived from personal observation, "When it throws itself upon its prey, it clings to the body by means of the double hooks which terminate its tarsi, and it then strives to reach the occiput, that it may insert its fangs between the skull and the first of the cervical vertebræ. I have observed in other American insects a similar destructive instinct§." With regard to its power of executing this, he says, "The muscular strength of the *Mygale* is very great, and it is with difficulty made to let go what it seizes, even when the surface scarcely presents a hold for the claws with which the tarsi are armed, or for the powerful fangs which assist them to kill birds and the *Anolis*. Its obstinacy and ferocity in fighting cease only with its life." It would be easy to add other authorities in support of their strength and rapacity, and those already cited state that *Mygale* spins nets or webs; I did not say they constructed geometrical webs, for very few genera of spiders form these, although all the pulmonary spiders have the means of spinning some kind of net.

I will now cite the words of Mr. MacLeay's letter to me, to show how far my account, which is to be found extracted in his letter to you, differs from his own; for, as old Chapman sings, I have no wish to "blanch things further than their truth." Mr. MacLeay's words, *verbatim*, are these: "I wish you would have the goodness to mention to such of your friends as have taken up the study of *Arachnidæ*, that I have found a spider that will prey on small birds, and in fact catches them in its net as well as insects. In my paper on *Mygale* in the 'Zoological Transactions' I expressed a belief that no true bird-catching spider exists; but I retract this belief, as I have found a spider of the family *Epeiridæ*

* Account of Ceylon. London, 1805, p. 310.

† Nouv. Dict. d'Hist. Nat., second edition, vol. xxii. p. 113.

‡ Ibid, p. 117.

§ Ibid.

actually *devouring* the young of a *Zosterops* that had no doubt lately flown from the nest. My father had witnessed the same circumstance before, so that there is a *spider* which will feed on the juices of a warm-blooded animal. However, its more common food consists of *Gryllidæ* and large *Lepidoptera*."

Having shown that I had authority for saying that *Mygale* makes nets and catches birds in them, I think the *probability* of the accuracy of the accounts enumerated above of their feeding upon birds was a legitimate deduction from the analogical discovery of one whom we know to be a fully competent observer, and I therefore suggest the comparison of the two extracts, which is all that either party said upon the subject, and which will necessarily reduce my "tissue of mistakes" to two, namely, 1st. The mistake of one name for another, which in Mr. MacLeay's autograph was exceedingly similar; and 2ndly, my too hastily stating that he retracted his observations upon *Mygale*; whereas it should have been merely that he retracted his disbelief that any spider fed upon the juices of a warm-blooded animal. For this mis-statement I beg to apologize to him, although it is very venial, considering the array of authorities quoted above in support of the opinion that *Mygale* is a red- and warm-blood-thirsty creature, and that it constructs a web.

I am, Gentlemen, truly yours,

W. E. SHUCKARD.

Robert Street, Chelsea, January 2, 1842.

LIV.—On a new species of *Araucaria* from New South Wales; and on *Nuytsia floribunda*. By H. BIDWILL, Esq.*

DESCRIPTION of a new species of *Araucaria* from about forty miles N.W. of Moreton Bay, New South Wales.

A tree from 100 to 200 feet high, often without branches for 100 feet. Branches very slender, lax, verticillate; branchlets very numerous, slender; leaves sessile, of two different kinds on different parts of the branches; some $\frac{3}{4}$ ths of an inch long, somewhat triangular, slightly incurved, very like those of young specimens of *A. imbricata*; the others lanceolate, 2 inches long, $\frac{1}{2}$ an inch wide, recurved; both somewhat mucronate, surrounding the stem as in other species, but not so numerous; the long ones are probably produced in summer, and the others in winter. Neither cones nor male flowers seen. Scales from top of cone containing abortive seeds 3 inches

* We have to thank Mr. Bidwill for the male twig which accompanied his description; and shall be happy to avail ourselves of his offer.—ED.